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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,936	12/03/2001	Jinsaku Masuyama	016295.0733 (DC-03225)	7808

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EXAMINER	
CHEN, TSE W	
ART UNIT	**PAPER NUMBER**
2116	

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,936	MASUYAMA ET AL.	
	Examiner	Art Unit	
	Tse Chen	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 24, 2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-9, 11, 14-16, 18-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, U.S. Publication 2002/0198608, in view of Fung, US Publication 20050177755, and Ando, Japanese Publication 2000-102166.

4. In re claim 1, Smith discloses a computer system [fig.2; multiple processor combination 100] comprising:

- At least two server modules [server blades 102-1 and 102-n; fig.2].
- A midplane [pci bus 110] associated with the at least two server modules, the midplane operable to receive the at least two server modules and to provide a unique address for each server module based on the location of each server module on the midplane [0025-0026].

- At least one address module [system server blade 102-0] associated with the at least two server modules, the address module operable to obtain the unique address from the midplane for each server module [0029; determines unique address of each server module based on GA pins].

5. Smith did not discuss details of power management for the system.

6. Fung discloses a computer system [fig.1] comprising at least one module [e.g., management module] associated with at least two server modules, the module operable to perform power management functions [i.e., calculate start-up time] for each server module [0024; 0027].

7. Fung did not discuss the details of starting up [i.e., a component of power management functions] the server modules.

8. Ando discloses a computer system [electronic equipment] comprising:

- A start-up time [e.g., deltaT; time shifted] for a server module [103; card analogous to server for processing communication signals] based on the unique address [e.g., slot address 502] for the server module and an inrush load requirement [e.g., startup set longer than the lasting time of the inrush current] of the server module [abstract, solution; 0022; 0029, 0033].
- At least one power supply [102] associated with the midplane [101], the power supply operable to supply power to start up the modules, the power supply operable to sequence power to start up the server modules based on the start-up times [timing for supplying power to each module is shifted] for each of the server modules [abstract; 0001; 0022; 0027; 0039-41].

9. It would have been obvious to one of ordinary skill in the art, having the teachings of Smith, Fung and Ando before him at the time the invention was made, to modify the system taught by Smith to include the teachings of Fung and Ando, in order to obtain the claimed system. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to maintain performance while reducing power consumption in a server farm via global power management [Fung: 0008-11], taking into consideration the importance of managing the initial inrush current at startup to limit the power supply means [Ando: abstract] .

10. As to claims 2 and 15, Smith discloses, wherein the server modules comprise blade servers [incorporate multiple 102 blade servers as one server module as it is well known in the art to incorporate a plurality of servers into one module].

11. As to claims 3 and 16, Examiner has taken Official Notice that brick and blade servers are known equivalents as prior art. One of ordinary skill in the art would have chosen either brick or blade server based on the configuration requirements of the system. Accordingly, it would have been obvious to replace blade servers with brick servers to be sequentially powered up in an autonomous fashion.

12. As to claims 4 and 19, Smith discloses, wherein the midplane comprises a circuit board including two or more connectors [multiple compact pci connectors for multiple modules] coupled to the midplane and two or more resistors [some kind of resistors for the multiple GA pin is needed or a short may occur] coupled to the midplane [0025]. Regarding the resistors, the Examiner has taken Official Notice that it is prior art to use pull-up resistors to signify a certain bit of information. One of ordinary skill in the art would have been motivated to make such a combination in order to provide status information in an electrical interconnection.

13. As to claim 5, Smith discloses, wherein the connectors [multiple compact pci connectors for multiple modules] are operable to provide an interface between the server modules and the midplane [0025-26].

14. As to claim 6, Smith discloses, wherein each connector [compact pci connector 112] is operable to interface with one server module [fig.1; 0025].

15. As to claims 7 and 20, Smith discloses, wherein the midplane provides a unique address to each server module through resistor strapping the one or more resistors [0025].

16. As to claim 8, Ando discloses, wherein the midplane is further operable to provide an interface [301] between the server modules and the power supply [0024].

17. As to claims 9, 21 and 22, Ando discloses, wherein the power supply is operable to provide power to each server module upon expiration of the start-up time [e.g., deltaT] for each server module [0022].

18. As to claims 11 and 18, Fung discloses, wherein each address module includes a timer [376], the address module further operable to set the timer with the start-up time and the timer operable to count to [down from] the start-up time [0037]; and Ando discloses, on the expiration of the start-up time, switching a switch [407] to an on position that allows the server module to receive power from a power supply [0030]. Regarding the timer that is operable to count down from the start-up time, the Examiner has taken Official Notice that it is prior art to configure a timer to either count down or count to a known time for timing a duration. One of ordinary skill in the art would have been motivated to make such a combination in order to count towards a known time.

19. In re claim 14, Smith, Fung, and Ando disclose each and every limitation as discussed above in reference to claim 1. Smith and Ando disclose the computer system; therefore, Smith and Ando disclose the method of operating the system.

20. In re claim 23, Smith, Fung, and Ando disclose each and every limitation of the claim as discussed above in reference to claims 1 and 4-6 [i.e., inrush current requirement analogous to at least one start-up characteristic]. Furthermore, Fung discloses the computer system comprising one of more chassis [enclosure] operable to house the server modules, the midplane, and the power supply [0150].

21. As to claim 25, the Examiner has taken Official Notice that it is prior art for one or more cabinets to house one or more of the chassis.

22. Claims 10, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, Fung, and Ando as applied to claims 1 and 14 above, and further in view of Butka et al., U.S. Patent 6735704, hereinafter Butka.

23. In re claims 10 and 24, Smith, Fung, and Ando disclose each and every limitation of the claim as discussed above in reference to claims 1 and 14. Smith, Bottom, and Tsurumi did not discuss a management controller to provide redundant operation.

24. Butka discloses a system [10; fig.1] comprising a management controller [master controller 20] associated with the midplane [bus 22], the management controller operable to provide sequence redundancy by sequencing power to the server modules if the midplane experiences a failure [col.4, ll.8-51; col.5, l.34 – col.6, l.62].

25. It would have been obvious to one of ordinary skill in the art, having the teachings of Butka, Smith, Fung, and Ando before him at the time the invention was made, to modify the

system taught by Smith, Fung, and Ando to include the redundancy teachings of Butka, in order to permit the system to continue normal operations in the event of a failure [Butka: col.1, ll.20-42]. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to permit the system to continue normal operations in the event of a failure.

26. In re claim 17, Smith, Fung, and Ando disclose each and every limitation of the claim as discussed above in reference to claim 14. Smith, Fung, and Ando did not disclose explicitly a multiplication factor.

27. Butka discloses a method wherein calculating the start-up time [delay seconds] comprises:

- Obtaining a multiplication factor [power subsystem number-1] for each server module [power nodes] and calculating the start-up time using the multiplication factor [col.4, ll.8-39].

28. It would have been obvious to one of ordinary skill in the art, having the teachings of Butka, Smith, Fung, and Ando before him at the time the invention was made, to modify the system taught by Smith, Fung, and Ando to include the multiplication factor teachings of Butka, in order to avoid simultaneous power supplies [Butka: col.1, ll.8-39]. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to avoid simultaneous power supplies.

29. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, Fung, and Ando as applied to claim 1 above, and further in view of Duley, U.S. Patent 6766222.

30. In re claim 12, Smith, Fung, and Ando disclose each and every limitation of the claim as discussed above in reference to claim 1. Smith, Fung, and Ando did not disclose explicitly switches associated with the server modules.

31. Duley discloses a system [power sequencing system] comprising s switch associated with each server modules [slave] and the at least one address module [master], the switch operable to accept a command from the address modules to switch between an on position and an off position [col.6, ll.18-39; col.6, l.50 – col.7, l.49].

32. It would have been obvious to one of ordinary skill in the art, having the teachings of Duley, Smith, Fung, and Ando before him at the time the invention was made, to modify the system taught by Smith, Fung, and Ando to include the switches of Duley, in order to provide cost savings in power supplies [Duley: col.7, l.50 – col.8, l.4]. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to provide cost savings in power supplies.

33. As to claim 13, Ando discloses, wherein at the expiration of the start-up time a module switches a selected switch [407] to the on position allowing an associated server module [card] to receive power from the power supply [0030].

Response to Arguments

34. Applicant's arguments dated March 24, 2006 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tse Chen
May 24, 2006

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